Two Tower Center Blvd.
10th Floor
East Brunswick, New Jersey 08816

CHEMICAL LAND HOLDINGS, INC.

July 27, 2000

U.S. Environmental Protection Agency, Region II
Emergency and Remedial Response Division
290 Broadway, 19th Floor, Room W-20
New York, NY 10007-1866

Attention: Ms. Janet Conetta
Strategic Integration Manager

Subject: Meeting Notes – Risk Assessment Kickoff Meeting
Passaic River Study Area
Administrative Order on Consent Index No. II-CERCLA-0117

Dear Ms. Conetta:

Please find enclosed notes of the Risk Assessment Kickoff Meeting held on July 19, 2000 at the New Jersey Department of Environmental Protection in Edison, NJ.

Sincerely,

C. Firstenberg

Clifford E. Firstenberg
Project Manager
On behalf of Occidental Chemical Corporation
(as successor to Diamond Shamrock Chemicals Company)

enclosure

(2 copies sent)

Copy to:

J. Berg (NJDEP)
J. Conetta (USEPA)
L. Cullen (NJDEP)
E. Demerest (NJDEP)
G. Ferreira (USEPA)
B. Finley (Exponent)
A. Hayton (NJDEP)
T. Iannuzzi (BB&L)
S. Jaffess (USEPA)
M. Moese (TAMS)
M. Olsen (USEPA)
M. Thiagaram (TAMS)
T. Wolfskill (L.A. Wolfskill)

2c: Section Chief
NJDEP-Bureau of Federal Case Management
401 East State Street - CN 028
Trenton, NJ 08625-0028
Attn: Jonathan D. Berg

1c: Chief, New Jersey Superfund Branch
Office of Regional Counsel
U.S. Environmental Protection Agency
290 Broadway, 19th Floor, Room W-20
New York, NY 10007-1866
Attention: Diamond Alkali Site Attorney - Passaic River Study Area

MEETING NOTES
Risk Assessment Kickoff
July 19, 2000
10AM

Attendees

Chemical Land Holdings	U.S. EPA
C. Firstenberg (CLH Project Manager)	J. Berg (NJDEP – Case Manager)
B. Finley (Consultant – Human Risk)	J. Conetta (USEPA – Strategic Integration Manager)
T. Iannuzzi (Consultant – Eco Risk)	L. Cullen (NJDEP – ETRA Unit)
T. Wolfskill (Consultant)	E. Demerest (NJDEP – Research Scientist)
	G. Ferreira (USEPA – Environmental Scientist)
	A. Hayton (NJDEP – Technical Coordinator)
	S. Jaffess (USEPA – Remedial Project Manager)
	M. Moese (TAMS – Consultant)
	M. Olsen (USEPA – Environmental Scientist)
	M. Thiagaram (TAMS – Consultant)

Preliminaries

- The meeting began at approximately 10:00 AM and concluded at 1:00 PM.
- Sharon Jaffess distributed an Agenda (attached)
- Attendees are listed above, and a copy of the Sign-in Sheet is attached.

Meeting Notes (The listed topics refer to the Agenda handed-out at the meeting)

1. Introductions/Roles

Jaffess noted each attendee and explained their affiliation and role in the project.

2. Risk Assessment Process

Jaffess began the meeting by explaining that CLH would use RAGS Part D (Risk Assessment Guidance for Superfund Volume 1) to develop the human health risk assessment (HHRA) for the Passaic River Study Area (Study Area). Part D was developed to clarify earlier Parts of RAGS, and includes tables, worksheets, forms, and prescriptive instructions on filling-out these documents in support of a HHRA.

CLH was instructed to fill in each of these tables and to seek guidance from Jaffess regarding questions and assumptions.

Although applicable to both the HHRA and the ecological risk assessment, the issue of a risk assessment protocol document was discussed during this part of the meeting, and it was agreed that CLH will not be required to submit a protocol document for the risk assessment.

Olsen explained that the objective is to involve EPA in each step of the process, and that CLH will submit the RAGS Part D tables in specific groupings. Following is the list of interim deliverables, with explanations/qualifications discussed at the meeting.

HHRA Interim Deliverable 1

- Table 1: Selection of Exposure Pathways
  - Essentially, the conceptual site model
  - This table can be started now
- Table 4: Values Used for Daily Intake Calculations

HHRA Interim Deliverable 2

- Table 2: Occurrence, Distribution, and Selection of Chemicals of Potential Concern
  - Begin developing; can not complete until Spring ESP data validated
  - Prepare first two columns (CAS number and chemical) now
- Table 5: Non-Cancer Toxicity Data – Oral/Dermal and Inhalation
  - Include Table 5.3: Special Case Chemicals for lead
- Table 6: Cancer Toxicity Data – Oral/Dermal and Inhalation
  - WHO – TEFs for individual congeners
  - HEAST – 150K slope factor
  - Dioxin Reassessment – not a data source unless finalized

HHRA Interim Deliverable 3

- Table 2: Occurrence, Distribution, and Selection of Chemicals of Potential Concern
  - Include all final data
  - Includes limited statistics (min, max, background, etc.)
- Table 3: Medium-Specific Exposure Point Concentration Summary
  - Additional statistics (mean, 95%UCL, Median EPC, etc.)
  - Multiple tables

HHRA Interim Deliverable 4

Do not develop Tables 7-10 until EPA has reviewed and approved prior interim deliverables.

- Table 7: Calculation of Non-Cancer Hazards
- Table 8: Calculation of Cancer Risks
- Table 9: Summary of Receptor Risks and Hazards for COPCs
- Table 10: Risk Assessment Summary
- Lead worksheets
- Uncertainty Analysis
- Probabilistic Risk Assessment

After EPA approves these interim deliverables, CLH will be ready to prepare the HHRA.

3. Questions/Comments/Discussion on RAGS Part D Approach.

Discussion occurred throughout Olsen's reading of the tables and listing of the data required in each.

Cullen explained that NJDEP will be evaluating CLH's submittals against soil cleanup standards since they believe that a major route of exposure is direct contact of workers and community volunteers who clean up trash from the river banks.

Hayton asked that maps of data be developed and submitted with the tables to assist NJDEP with review. Firstenberg explained that while CLH has the data, and that maps of this type will be developed, this task is not planned to occur now, and is not trivial, given the magnitude of the dataset. Conetta agreed that this deliverable was more appropriate as a part of the Remedial Investigation report.

Cullen is concerned about exposure to boaters who row/scull. She does not anticipate this to be a risk driver, but it needs to be evaluated so NJDEP can report to the public regarding their expressed concerns.

4. General Approach for Ecological Risk Assessment

Ferreira directed CLH to use ERAGS. ERAGS is not as prescriptive as RAGS Part D, so the interim ecological risk assessment (ERA) deliverables are not as clearly defined.

Iannuzzi suggested, and Ferreira agreed to the following interim ERA interim deliverables:

ERA Interim Deliverable 1

- Problem formulation document that includes the following components:

    - Summary of components of the SLHERA that focus on ERAGS requirements
    - Selection of receptors of interest
    - Conceptual site model
    - Risk questions
    - Identification of assessment and measurement endpoints
    - Preliminary list of COCs

ERA Interim Deliverable 2

- Exposure parameters for receptors of interest by species
- TRVs for chemicals and species
- Final list of COCs (based on final data)

EPA will review these interim deliverables, and follow with a series of meetings. After resolution of outstanding issues, CLH will proceed with ERAGS Step 6 – Risk Assessment.

5. Questions/Comments/Discussion on ERAGS Approach.

Discussion occurred throughout Ferreira's discussion of ERAGS' requirements and development of the suggested interim deliverables.

The SLHERA document submitted by CLH to USEPA in July 1995, does not have to be re-written or resubmitted by CLH.

6. Site Specific Issues – Overview and Discussion

- The Dioxin Reassessment

CLH does not have to use the reassessment as a source for toxicity criteria, unless it is finalized in time. EPA will provide instructions. Also discussed the Peer Review Panel presentation to the public next week in Washington, DC.

- Future Use of the River

Occupational risk should be considered. Minish is the first step in the river's renaissance. Planners envision walkways, increased boating and general usage of river. CLH needs to take this into account. The future use will likely be recreational.

- Migratory Species and the human health and ecological risk assessment

CLH needs to consider beyond the 6-mile Study Area, including home ranges of captured species from ecological sampling, and angler activity.

- Probabilistic Analysis

Olsen explained that EPA prepared a Monte Carlo analysis for the Hudson River risk assessment and demonstrated that the results of the Monte Carlo analysis supported the point estimate approach. EPA is not against Monte Carlo analyses and has developed guidance documents for such analyses (NJDEP has not), however, CLH needs to inform the Agency of its intent as soon as possible so Olsen can get input from guidance groups within EPA and get management support.

EPA developed RAGS Part 3 to describe a tiered approach to Monte Carlo. Although this has not yet been released, CLH should follow the intent of Part 3. Therefore, Olsen wants a Work Plan submitted, including discussion of distributions, and will follow with a series of meetings to review the Work Plan. RAGS Part 3 has a checklist of what needs to be included in the Work Plan. CLH requested the current checklist and Olsen agreed to provide it, along with expanded descriptions of what she needs. Olsen also wants the model code so EPA can run the same analyses on CLH's data.

EPA will support Monte Carlo, as appropriate, for exposure. There are ongoing discussions within the Agency as to the appropriateness of using distributions for toxicity criteria. If CLH proposes to use distributions for any toxicity criteria, this would need to be discussed with the Agency beforehand.

7. Preliminary Discussion on Exposure Pathways/Chemicals of Concern

EPA is concerned over increased exposure to workers who may perform maintenance, clean-up crews, and boaters who row/scull. All agreed that swimming was unlikely, but that EPA/CLH needed to interview the cities' (Newark, Kearny, Harrison) planners to determine future use according to plan.

- Anglers – include fish and crab ingestion.
- Sculling on river – include to address community concerns (contact rowing clubs on river to get data; collect age-based statistics).
- Bank contact – riverbank cleanup.
- Direct contact with sediments/water.
- Homeless people who live along shoreline and bathe in combined sewer overflow (CSO) water. These people are probably not eating fish/crab due to lack of facilities to clean/cook – most go to soup kitchens or volunteers bring food to them.

- Children's health – major concern within Agency.
- Volatiles – need to be considered.

Future exposure to include construction and maintenance workers, marina workers (e.g., if people launch boats via ramp – not an issue for lifts).

8. The Next Steps

- Firstenberg to prepare meeting notes and distribute.
- People with action items will follow-up.
- EPA will provide letter to CLH in response to CLH's letter of February 16, 2000 regarding schedule issues. This letter will provide guidance to CLH on schedule for the interim deliverables discussed during the meeting
- Firstenberg will check with CLH management and legal regarding EPA's directive to use RAGS Part D and to submit interim deliverables, since this is not spelled-out in the Administrative Order on Consent.
- Olsen will provide a full list of references to CLH for human risk assessment.
- Firstenberg to notify Jaffess of intent to use Monte Carlo analysis.
- Olsen will provide requirements for Work Plan to use Monte Carlo analysis.

C:\Projects\AOC\Risk Assessment\Meeting 7-19-00\Draft Meeting Notes.doc

Mtg @ NJDEP
EPA Agenda.
7/19/00

July 19
~~June~~ 18, 2000

Diamond Alkali Superfund Site - Passaic River Study Area
Risk Assessment Kick-Off Meeting

1. Introductions/Roles (Sharon Jaffess)

2. Risk Assessment Process (Sharon Jaffess, Marian Olsen, Gina Ferreira)

Risk Assessment Guidance for Superfund
http://www.epa.gov/superfund/programs/risk/index.htm

RAGS Part D complements Parts A, B, & C and presents approaches to standardize risk assessment planning, reporting, and review. RAGS Part D approach:

Use of Standard Tools / Interim Deliverables (see page 3-12 - 3-18 of RAGS Part D)
Continuous Involvement of EPA Risk Assessors
Electronic Data Transfer to the National Superfund Database

Other guidance such as: Data Useability in Risk Assessment (Part A), 9285.7-09A, April 1992

3. Questions/Comments/Discussion on RAGS Part D Approach

4. General Approach for Ecological Risk Assessment (Gina Ferreira, Sharon Jaffess)

Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessment (OSWER 928.7-25, June, 1997) and other guidance such as:
Wildlife Exposure Factors Handbook Volumes I and II
http://www.epa.gov/superfund/programs/risk/ecologc.htm
http://www.epa.gov/ncea/ecologic.htm

5. Questions/Comments/Discussion on ERAGS Approach

6. Site Specific Issues - Overview & Discussion
   - The Dioxin Reassessment
   - Future use of the river
   - Migratory species and the human health and ecological risk assessment
   - Probabilistic Analysis

7. Preliminary Discussion on Exposure Pathways / Chemicals of Concern

current and future - medium - exposure point - receptor population - receptor age - exposure route - on-site/off site

8. The next steps

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

MEETING ATTENDANCE SHEET

SUBJECT	DATE
Passaic River Study Area	July 19, 2000
MEETING LOCATION: NJDEP, Trenton, NJ	
GROUP(S) ATTENDING: USEPA, NJDEP, CLH + Consultants	DEP DIVISION: DRPSR, BCM

NAME	TITLE	TELE EXT.	AFFILIATION
Jonathan Berg	Case Mgr	609-633-0737	NJDEP
Sharon Jaffess	RPM	212-637-4396	US EPA
Brent Finley	Consultant to CLH	510-208-2010	Exponent
Timothy Iannuzzi	Consultant to CLH	410-295-1205	BBL Sciences
Mark Moese	Consultant to EPA	973-338-6680	TAMS Consultants
Mike Thiagaram	Consultant to EPA	973-338-6680	TAMS Consultants.
Anne Hayton	Tech. Coordinator	(609) 984-9772	NJDEP
Ed Dennarest	Research Scientist	(609) 984-9771	NJDEP
Janet Coretta	Str. Dt. Manag	212 637-4417	EPA
Linda Cullen	ERA Unit	609 484-9778	NJDEP
Cliff Firstenberg	Project ~~CLH~~ Manager	757-258-7720	CLH
Tony Wolfskill	Consultant	936 891 5702	CLH
Marian Olsen	Env. Sci.	212-637-4313	USEPA.
Gina Ferreira	Env. Scientist	212 637-4431	USEPA

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